

*Oenothera*. He gives the telosynaptic account, involving the segmentation of the thick spirem (pachynema) into a single chain of chromosomes. No new facts regarding reduction are brought out, and there are no deviations from the history of reduction as already known for *O. Lamarckiana* and its mutants. The reviewer, in a paper before the Botanical Society of America in 1908,<sup>29</sup> showed that the process of reduction in the mutating forms can be duplicated by figures of every stage in *O. biennis* and *O. laevifolia*, there being the same tendency not to form close pairs, and the same loose arrangement of the chromosomes on the heterotypic spindle. This permits of occasional irregularities in the distribution of the chromosomes during reduction, and these were found to occur in normal material of *O. biennis*, as in the mutating forms. Thus no differences in the method of reduction in the different species and races of *Oenothera* have yet been found, except in *O. grandiflora*, in which DAVIS<sup>30</sup> obtains what he thinks are rings, in the place of loose heterotypic bivalents. As the reviewer has already pointed out,<sup>31</sup> the supposed rings are probably due to a greater attraction between homologous chromosomes in *O. grandiflora* than in the other forms.—R. R. GATES.

**Florida peat deposits.**—This report<sup>32</sup> is the result of a general survey of peat formations and distribution in Florida, without detailed examination or studies. Immature topography affords the most favorable surface water conditions for deposit of peat if associated with proper climate, not too dry nor too cold, as in glaciated areas of eastern North America and of Europe, and in the Coastal Plain of the southeastern United States. Florida seems to offer ideal conditions, having a greater variety of swamps, bogs, marshes, and places where peat accumulates than any equal area in North America, and also an ample rainfall. A tentative classification of the peat is based on the nature of the water with which it was found associated: salty, muddy, calcareous, swamp waters, with several exceptional deposits. The best and deepest peat is that in the peat prairies classed as "filled lakes"; under the same division is included the northern everglades. Analyses of 53 samples indicate a good average quality, the fuel value being above the average for pressed peat (8500 B.T.U.; DAVIS) for two-thirds of the samples. The list of peat plants includes 83 families of angiosperms, 6 conifers, *Isoetes*, 2 lycopodiums, *Azolla* sp., 11 ferns, several mosses, and *Chara*.—LAURA GANO.

**Sporangia of Weichselia.**—This is a cretaceous genus of fernlike plants known heretofore only from the bipinnate sterile fronds. The question has

<sup>29</sup> GATES, R. R., Further studies of oenotheran cytology. *Science* N.S. **29**:269. 1909.

<sup>30</sup> DAVIS, B. M., Pollen development of *Oenothera grandiflora*. *Annals of Botany* **23**:551-571. pls. 41, 42. 1909.

<sup>31</sup> BOT. GAZETTE **49**:64-66. 1910.

<sup>32</sup> HARPER, ROLAND M., Preliminary report on the peat deposits of Florida. Included in third Ann. Rep. Fla. State Geol. Survey. 1910.